

transmitting a modified request message from said intermediary node
including information about said second node;

receiving at said intermediary node, an acknowledgment message transmitted
from a destination node; and

retransmitting said acknowledgment message from said intermediary node to
said source node, whereby a circuit is established for routing a data message between said
source node and said destination node via said intermediary node.

10. The method of claim 9 wherein said steps of transmitting and
retransmitting include the step of transmitting on a VHF frequency.

11. The method of claim 9 wherein said steps of transmitting and
retransmitting include the step of transmitting on an UHF frequency.

12. The method of claim 9 wherein said data message is a voice
communications message.

13. The method of claim 9 wherein said data message is a broadband data
message.

14. A method for telecommunications comprising the steps of:

receiving a message at an antenna located aboard an aircraft;

inputting said message to a signal processing device to determine if said
message is destined for said aircraft; and

retransmitting said message from said aircraft when said message is destined
for other than said aircraft.

15. The method for telecommunications of claim 14 wherein said step of
retransmitting said message further comprises the step of transmitting on a VHF frequency.

16. The method for telecommunications of claim 14 wherein said step of
retransmitting said message further comprises the step of transmitting on an UHF frequency.

17. The method for telecommunications of claim 14 wherein said step of
inputting said message to a signal processing device further comprises the steps of:

3 predicting a future position of said aircraft;
4 predicting a future position of a source node from which said message was
5 received; and
6 determining if communications can be maintained with said source node over
7 a predefined time interval.

1 18. The method of claim 14 wherein said message is a broadband data
2 message.

1 19. The method of claim 14 wherein said message is a voice
2 communications message.

1 20. The method of claim 17 wherein said step of inputting said message
2 further comprises the steps of:

3 predicting a future position of a next circuit node; and
4 determining if communications can be maintained with said next circuit node
5 over said predefined time interval.

1 21. A computer program product for a telecommunications network
2 comprising:

3 a computer readable storage medium having computer readable program code
4 means embodied in said medium, said computer readable program code means comprising:
5 a first computer instruction means for accessing a message received at an
6 antenna located aboard an aircraft;

7 a second computer instruction means for determining if said message is
8 destined for said aircraft; and

9 a third computer instruction means for writing said message to a storage
10 device coupled to an aircraft transmitter when said message is destined for other than said
11 aircraft.

1 22. The computer program product of claim 21 further comprising:

a fourth computer instruction means for determining if communications can be maintained with a node from which said message was received during a predefined time interval.

23. The computer program product of claim 21 further comprising:

a fourth computer instruction means for determining if communications can be maintained during a predefined time interval with a node within reception range of said aircraft transmitter.

24. The computer program product of claim 23 further comprising:

a fifth computer instruction means for reading an aircraft position information.

25. The computer program product of claim 22 further comprising:

a fifth computer instruction means for reading an aircraft position information.

26. The computer program product of claim 21 further comprising:

a fourth computer instruction means for writing said message to a local distribution subsystem for routing said message to a system aboard said aircraft.

27. An apparatus for routing messages in a telecommunications network comprising:

an input for inputting a message received at an antenna located aboard an aircraft;

an output; and

a signal processing device, coupled to said input and to said output, for:

determining if said message is destined for said aircraft;

outputting said message to a first storage device coupled to an aircraft transmitter when said message is destined for other than said aircraft; and

outputting said message to a second storage device coupled to a local message distribution system when said message is destined for said aircraft.

28. The apparatus of claim 27 wherein said signal processing device comprises a general purpose processor.

1 29. The apparatus of claim 27 wherein said signal processing device
2 comprises a router.

1 30. The apparatus of claim 27 wherein said input is further adapted to
2 receive signals indicative of aircraft position and wherein said signal processor determines if
3 communications can be maintained during a predefined time interval with a communications
4 node within reception range of said aircraft transmitter.

1 31. A computer program product for telecommunications comprising:
2 a computer readable storage medium having computer readable program code
3 means embodied in said medium, said computer readable program code means comprising:

4 a first computer instruction means for reading a request message
5 transmitted from a source node and received at an antenna located aboard an aircraft;

6 a second computer instruction means for writing a modified request
7 message including data about said aircraft to a storage device coupled to an aircraft
8 transmitter;

9 a third computer instruction means for reading an acknowledgment message
10 transmitted from a destination node in response to broadcast of said modified request
11 message; and

12 a fourth computer instruction means for writing a modified acknowledgment
13 message including said data about said aircraft to said storage device for transmission from
14 said aircraft and whereby a circuit is established for routing a data message between said
15 source node and said destination node via said aircraft.

1 32. The computer program product of claim 31 further comprising:

2 a fifth computer instruction means for reading an aircraft position information.

1 33. The computer program product of claim 32 further comprising a sixth
2 computer instruction means for predicting if communications over said circuit can be
3 maintained during a predefined time interval.

1 34. An apparatus for routing messages in a telecommunications network
2 comprising:

an input;
an output; and
a signal processing device, coupled to said input and to said output, for:
reading a request message transmitted from a source node, received at an
antenna located aboard an aircraft and provided to said input;
outputting a modified request message including data about said aircraft;
reading an acknowledgment message transmitted from a destination node in
response to a broadcast of said modified request message; and
outputting a modified acknowledgment message including said data about said
aircraft for transmission from said aircraft whereby a circuit is established for routing a data
message between said source node and said destination node via said aircraft.

35. The apparatus of claim 34 wherein said signal processing device
comprises a general purpose processor.

36. The apparatus of claim 34 wherein said signal processing device
comprises a router.

37. The apparatus of claim 34 wherein said input is further adapted to
receive signals indicative of aircraft position and wherein said signal processor determines if
communications can be maintained during a predefined time interval with a communications
node within reception range of said aircraft transmitter.

38. A telecommunications network architecture comprising:
a source node;
a destination node; and
a plurality of airborne aircraft, each airborne aircraft having a radio
transmit and receive capability, for routing a packet data between said source node and said
destination node via said plurality of airborne aircraft.

39. The telecommunications network of claim 38 wherein said source node
is an aircraft.

1 40. The telecommunications network of claim 38 wherein said destination
2 node is an aircraft.

1 41. The telecommunications network of claim 38 wherein at least one of
2 said source node or said destination node is a groundbased network.

1 42. The telecommunications network of claim 38 wherein said transmit
2 and receive capability includes a VHF transmit and receive capability.

1 43. The telecommunications network of claim 38 wherein said transmit
2 and receive capability includes an UHF transmit and receive capability.